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ANTS FROM HISPANIOLA AND MONA ISLAND

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BY WILLIAM MORTON WHEELER

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No. 2.—*Ants from Hispaniola and Mona Island*

BY WILLIAM MORTON WHEELER

The descriptions and records of ants in the following paper are based on four small collections. Two of these were made in the Haitian Republic by Mr. W. J. Eyerdam during the summer of 1927 and by Dr. P. J. Darlington during the autumn of 1934; the other two in the Dominican Republic by Mr. F. E. Watson in 1915 and on Mona Island by Dr. F. E. Lutz of the American Museum of Natural History in 1914. The material collected by Dr. Darlington is of unusual interest because it adds some 13 species, subspecies and varieties to the list of known ants from Haiti and strengthens our conviction, based on Dr. W. M. Mann's extensive collections of 1912-13, of the richness and striking endemicity of the ant-fauna of Hispaniola. Dr. Darlington's success was due not only to his very unusual ability as a collector, but also to the fact that he is the first entomologist to explore the Massif de la Hotte in the southwestern peninsula of the island and to climb its high summit.

Family FORMICIDAE

Subfamily PONERINÆ

*Platythyrea punctata* F. Smith. Dominican Republic: San Lorenzo ♀ (Watson).

EMERYELLA SCHMITTI MINOR subsp. nov.

*Worker.* Length about 5.5—7 mm.

Averaging decidedly smaller than the typical *schmitti* and with the striation of the head, thorax and petiole distinctly coarser and sharper. Color darker; head, thorax, mandibles and scapes black; funiculi fuscous except at their tips.

Four specimens taken by Dr. Darlington in the northeastern foot-hills of the Massif de la Hotte, 3000 ft.

*Euponera (Trachymesopus) stigma* Fabr. Haiti: Northeastern foot-hills of the Massif de la Hotte, 3000-4000 ft. ♀; La Visite 6000-7000 ft. ♀ and Ennery ♀ (Darlington).

*Ponera ergatandria* Forel. Mona Island ♀ (Lutz); Haiti: Kenscoff 4500-5000 ft. ♀ (Darlington).

*Ponera foeda* Forel. Haiti: North-eastern foot-hills of the Massif de la Hotte, 3000 ft. ♀ (Darlington). Dominican Republic: Sanchez ♀ ♀ ♂ (Watson); Mona Island ♀ (Lutz).

*Ponera opaciceps* Mayr. Haiti: Etang Lachaux ♀, and northeastern foot-hills of the Massif de la Hotte, 3000 ft. ♀ (Darlington).

*Leptogenys (Lobopelta) antillana* Wheeler and Mann. Haiti: Etang Lachaux ♀ (Darlington).

✓✓ ANOCHETUS (STENOMYRMEX) HAITIANUS LONGISPINA subsp. nov.

*Worker.* Differing from the typical *haytianus* in having the head slightly narrower behind, with distinctly longer and more slender antennal scapes and funiculi, and in the greater length of the petiolar spines, which are fully twice as long as those of *haytianus*. The coloration is also different, the head and thorax being darker and distinctly red as are also the tibiae. The transverse striation of the thorax, especially in the epinotal region, is distinctly coarser, the middle of the pronotum smoother and more shining.

Six specimens taken by Dr. Darlington in the northeastern foot-hills of the Massif de la Hotte, Haiti, 3000–4000 ft. One of them has a much more voluminous gaster than the others and seems to be an apterous female. It has no traces of ocelli and there are no differences in the head, thorax or petiole.

*Odontomachus haematoda insularis* Guérin. Mona Island ♀ (Lutz). Dominican Republic: Sanchez, Samana and Villa Rivas ♀ ♂ (Watson). Haiti: Etang Lachaux ♀ (Darlington).

*Odontomachus haematoda paucidens* Emery. Haiti: Port au Prince, northeastern foot-hills of the Massif de la Hotte, 3000–4000 ft. and Miragoane ♀ ♀ (Darlington); Morne Rochelois, Hinche and Miragoane ♀ (Eyerdam).

Subfamily PSEUDOMYRMINÆ

*Pseudomyrma haytiana* Forel var. *affinis* Wheeler and Mann. Haiti: Mt. Trou d'Eau ♀ and hills north of Port au Prince ♀ (Darlington). Forel regarded *haytiana* as a subspecies of the Central American *championi* Forel, but it seems to me to deserve specific rank.

*Pseudomyrma haytiana* var. *torquata* Wheeler and Mann. Dominican Republic: Sanchez ♀ and Samana ♀ (Watson).

Subfamily MYRMICINÆ

*Pogonomyrmex (Ephebomyrmex) saucius* Wheeler and Mann. Haiti: Port au Prince ♀ (Darlington).

*Pogonomyrmex (Ephebomyrmex) schmitti* Forel. Haiti: Manneville ♀ (Darlington).

The specimens are distinctly darker than the cotype of *schmitti* in my collection and the specimens collected by Mann at Cape Haitien, Furey and Diquini, but as they exhibit no other perceptible differences I have not described them as a distinct variety.

*Pogonomyrmex (Ephebomyrmex) schmitti sublaevigatus* Wheeler and Mann.  
Port Terre Rouge, 2000 ft. ♀ (Darlington).

A single specimen which may belong to a distinct variety. It differs from the cotypes of *sublaevigatus* in being darker and in having the peduncle of the petiole and the anal segments black instead of reddish yellow. The rugae on the petiolar node are few, longitudinal and rather vague. I believe that *sublaevigatus*, originally described as a variety, should be raised to subspecific rank.

POGONOMYRMEX (EPHEBOMYRMEX) SCHMITTI ATERRIMUS subsp. nov.

*Worker.* Differing from the typical *schmitti* in being coal-black throughout, with only the apical portions of the mandibular blades and terminal tarsal joints brown, whereas the typical *schmitti* is brown-black or reddish brown, with red mandibles, and brown legs and tips of epinotal and metasternal spines. Moreover, the whole body of *aterrimus*, except the posterior half of the first gastric segment and the following segments is decidedly more opaque, the thoracic rugosity coarser, the dense punctuation of the petiolar node, post-petiole and anterior half of the first gastric segment decidedly sharper. Epinotal spines longer; petiolar node narrower, less expanded anteriorly, with the anterior end more acuminate and pointed and its dorsal surface more coarsely and irregularly rugose.

Described from three specimens taken by Dr. Darlington between La Visite and Kenscoff, Haiti, at an altitude of 5000-7000 ft. The altitude and deep coloration suggest that *aterrimus* is a distinctly subalpine form.

POGONOMYRMEX (EPHEBOMYRMEX) SCHMITTI DARLINGTONI subsp. nov.

*Worker.* Resembling *aterrimus* in its opacity and coal-black coloration, but with even longer and more slender epinotal spines (twice as long as the metasternal spines). The petiolar node is similarly narrowed (fully one and one-half times as long as broad) and pointed anteriorly. The thorax in profile is less convex than in the other forms of *schmitti*, with less regularly arcuate outline and its coarse dorsal sculpture is more irregular, vermiculate-reticulate, without

longitudinal trend of the rugæ. The whole gaster is opaque, finely and densely punctate. Tips of epinotal and metasternal spines, petiolar peduncle, dorsal surface of postpetiole, except posteriorly, and the anterior half of the dorsum of the first gastric segment, yellowish red. Anal segments reddish; sting yellow. Mandibles dark brown.

Described from six specimens taken by Dr. Darlington in the north-eastern foot-hills of the Massif de la Hotte at an altitude of 3000–4000 ft. This beautiful ant might be regarded as a distinct species were it not that the subspecies *aterrimus* seems to connect it with the typical *schmitti* and its subsp. *sublaevigatus*. *P. saucius* and *schmitti* constitute an isolated "Formenkreis" which is confined to Haiti.

*Veromessor relictus epinotalis* Wheeler and Mann. Haiti: Mt. Trou d'Eau, 4500 ft. ♀ (Darlington).

*Pheidole fallax jelskii* Mayr var. *antillensis* Forel. Haiti: Ennery ♂ ♀ (Darlington). Dominican Republic: San Lorenzo ♂ ♀ and Sanchez ♀ (Watson).

*Pheidole megacephala* Fabr. Haiti: Northeastern foot-hills of the Massif de la Hotte, 3000 ft. ♂ ♀ ♀ (Darlington); Top of Mt. Rochelois ♂ ♀ (Eyerdam). Dominican Republic: Samana, San Lorenzo and Sanchez ♂ ♀ (Watson).

*Pheidole moerens* Wheeler var. *creola* Wheeler and Mann. Haiti: Northeastern foot-hills of the Massif de la Hotte, 3000 ft. ♂ ♀ (Darlington).

The soldier differs from that of the typical *jamaicensis* in having the rugules on the front and sides of the head distinctly finer and more delicate and the median portions of the femora and flexor surfaces of the tibiae dark brown. The worker and female show the same color differences of the legs and also have the antennal clubs brown. The specimens from Petionville, Haiti, referred by Mann and myself to the typical *jamaicensis*, really belong to this variety.

Five soldiers, six workers and two winged females taken by Darlington in the northeastern foot-hills of the Massif de la Hotte, 3000–4000 ft.,

PHEIDOLE DARLINGTON sp. nov.

*Worker*. Length 1.3 — 1.5 mm.

Head subrectangular, slightly longer than broad, as broad in front as behind, with nearly straight sides and feebly concave posterior border. Eyes small, consisting of only about a dozen unequal ommatidia, situated just in front of the median diameter of the head. Mandibles rather large, with two larger apical and several minute basal teeth. Clypeus convex, with distinct median carinula and

broadly rounded, entire anterior border. Frontal area elongate-triangular, with median carinula. Antennae slender; scapes extending beyond the posterior border of the head to a distance equalling their greatest diameter; funicular joints 2-8 as long as broad, the 3-jointed club as long as the remainder of the funiculus, its two basal joints longer than broad, together shorter than the distinctly swollen terminal joint. Promesonotum convex, subhemispherical, slightly abrupt and angular in profile behind where it falls to the pronounced mesoepinotal impression; humeri feebly angular; promesonotal suture obsolete. Epinotum subcuboidal, decidedly lower and narrower than the promesonotum, with subequal base and declivity, the former nearly straight, horizontal, the latter sloping, the spines suberect, small, acute, longer than broad at their bases. Petiole slender, about three times as long as broad, parallel-sided, the node at the posterior third, rounded-cuneate in profile, its summit straight and transverse. Postpetiole slightly broader than the petiole, subglobular, its dorsal surface lower than the petiolar node. Gaster broadly elliptical, somewhat smaller than the head.

Mandibles smooth and shining, with fine, scattered, piligerous punctures, obscurely striate at the base. Head, thorax and peduncle of petiole opaque, densely and evenly punctulate; cheeks and clypeus also feebly, longitudinally rugulose; petiolar node, postpetiole, gaster, scapes and legs very smooth and shining.

Hairs yellowish, moderately long and sparse, erect or suberect, longest on the thorax and gaster, shorter and more oblique on the scapes and legs. Pubescence absent.

Sordid yellowish white; scapes, bases of coxae, femora, except their bases and tips, petiolar node, postpetiole, gaster, clypeus, front, sides of head and a small circular spot on the vertex, black or dark brown.

Six specimens taken by Dr. Darlington in the northeastern foothills of the Massif de la Hotte, at an altitude of about 3000 ft. I have ventured to base this species on the worker because it can be readily recognized by the singular coloration, which is unlike that of any worker *Pheidole* known to me, though resembling that of the soldier of the typical *punctatissima* Mayr.

*Cardiocondyla emeryi* Forel. Mona Island ♂ ♀ (Lutz).

*Cardiocondyla venustula* Wheeler. Mona Island ♂ (Lutz).

*Crematogaster (Orthocrema) steinheili* Forel. Dominican Republic (Aug. Busck) ♀.

*Monomorium carbonarium ebeninum* Forel. Dominican Republic: Sanchez ♂ ♀ (Watson).

- Solenopsis (Solenopsis) geminata* Fabr. Haiti: Hinche ♂ ♀ and Top of Mt. Rochelois ♀ (Eyerdam) Ennery, Miragoane and northeastern foot-hills of the Massif de la Hotte ♀ (Darlington). Dominican Republic: Sanchez, Villa Rivas and San Lorenzo ♀ (Watson).
- Solenopsis (Diplophoptrum) corticalis* Forel. Mona Island ♀ ♀ (Lutz).
- Macromischa (Macromischa) sallei haytiana* Wheeler and Mann. Haiti: La Visite, 6000-7000 ft. ♀ (Darlington).
- Macromischa (Macromischa) sallei opacinoda* Wheeler. Haiti: Roche Croix, La Hotte, 5000 ft. ♀ (Darlington).
- Tetramorium guineense* Fabr. Dominican Republic: Sanchez ♀ (Watson).
- Wasmannia auropunctata* Roger. Mona Island ♀ (Lutz). Haiti: Morne Rochelois ♀ (Eyerdam); Hills north of Port au Prince ♀ (Darlington). Dominican Republic: Villa Rivas ♀ (Watson).

## HYPOCRYPTOCERUS Mann

Emery, in the Myrmicine section of the "Genera Insectorum" (1921), has divided the peculiar tribe Cryptocerini into four genera: Procryptocerus Emery, Cephalotes Latreille, Zacryptocerus Ashmead and Cryptocerus Latr. The last of these he subdivided into three subgenera: Paracryptocerus Emery, Cryptocerus *sens. str.* and Cyathcephalus Emery (a preoccupied name recently replaced by Cyathomyrmex Creighton). Like the very distinct genus Procryptocerus, Cephalotes and Zacryptocerus are characterized by having monomorphic workers, whereas these are sharply dimorphic in Cryptocerus *sens. lat.* Emery erroneously included in his subgenus Cryptocerus the species *haemorrhoidalis* Latr. (1802), which has monomorphic workers and should therefore be regarded as the type of a distinct genus for which the name Hypocryptocerus is proposed.<sup>1</sup>

There are now before me specimens of no less than six different forms of Hypocryptocerus that agree with Latreille's description of *haemorrhoidalis* except in certain subspecific or varietal characters. Moreover, down to the present time no form corresponding in all respects with Latreille's account has been recovered. His description of the type, which was taken by Geoffroy de Villeneuve at Santo Domingo, is in part peculiarly disconcerting. In his diagnosis the specimen is said to have the "tête mutique; ses bords latéraux et l'anus rougeâtres (capite mutico, lateribus anoque rubescentibus)", but in the more detailed French description we have the statement "l'anus a une grande tâche rougeâtre séparée au milieu par un trait longitudi-

<sup>1</sup>Mann, in his paper on West Indian ants (1920) has used this name as a subgeneric designation for *haemorrhoidalis*, probably as the result of a conversation with me several years ago. Menozzi more recently (1930) has assigned this ant to Procryptocerus, regarded as a subgenus, apparently overlooking the fact that Procryptocerus is a clearly defined, neotropical genus not known to occur in the West Indies.



inal, formé de l'empiétement du noir en cette partie." In our paper on the ants of Haiti (1914), Mann and I conjectured that Latreille's description might have been based on an immature specimen with red anal region, but belonging to the form later (1863) described by Roger as *Cryptocerus hamulus* and by Forel (1901) as *C. haytianus*. We therefore regarded these forms as synonymous with *haemorrhoidalis*. But two of the forms described below, namely the subspecies *steinheili* Forel and *signatus* subsp. nov., have the dorsal surface of the first gastric segment reddish yellow, with a very conspicuous black, posteromedian spot or stripe, so that if we suppose Latreille to have employed the term "anus" in a quite unjustifiable sense, it is conceivable that he may have had before him a similar form but one with less of the first gastric segment reddish yellow. It is clear, at any rate, that unless his type specimen still exists or unless specimens turn up that agree more closely with his description than any since collected in Haiti or the Dominican Republic, we shall have to regard the identity of the true *haemorrhoidalis* as questionable. I have described all the following variants as subspecies though some of them have more pronounced characters than others. Very probably more forms will be discovered by future collectors, so that my study of this interesting Formenkreis must be fragmentary and provisional. Mann and I described the male of *haemorrhoidalis* but the female has never been seen, though this caste is common in collections of *Cryptocerus sens. lat.*

#### HYPOCRYPTOCERUS HAEMORRHODALIS HAMULUS Roger

*Worker.* This subspecies, of which Forel's var. *haytianus* is merely a synonym, as is evident from examination of a cotype in my collection, has the epinotal declivity densely punctate, without longitudinal rugæ or with only faint traces of them on the sides. The lateral borders of the mesonotum are distinctly dentate, the epinotal spines as long as the base of the epinotum, suberect, posteriorly diverging and slightly curved forward. The base of the first gastric segment is longitudinally rugulose. The hairs are yellowish, on the head, thorax and pedicel partly moderately long, erect, delicate and of uneven length, partly appressed, short, flattened and scalelike. These hairs are almost or quite absent on the dorsal surface of the gaster, the long erect hairs sparse and most numerous on its posterior portion. Black, except the expanded lateral margins of the head, the scapes and bases of funiculi, which are reddish yellow or testaceous, and the tips of the epinotal spines, knees and terminal tarsal joints, which are reddish brown.

The Haitian specimens from Port au Prince, Manneville, Diquini, Ennery and the mountains north of Jacmel, which Mann and I referred to the typical *haemorrhoidalis*, belong to this subspecies.

HYPOCRYPTOCERUS HAEMORRHODALIS AFFINIS subsp. nov.

*Worker.* Very similar to the worker of *hamulus* in sculpture, pilosity and color, but the epinotal declivity is strongly and regularly, longitudinally rugose and the basal rugules of the first gastric segment are distinctly finer and more numerous. The epinotal spines are distinctly longer and more tapering and the sides of the mesonotum are more rounded and edentate. The anterior corners of the petiolar node, however, are sharply dentate.

Described from two workers taken by Dr. Darlington at Poste Terre Rouge, Haiti, at an altitude of about 2000 ft.

HYPOCRYPTOCERUS HAEMORRHODALIS AURICOMUS sp. nov.

*Worker.* Like *affinis* in color and sculpture but with somewhat less pronounced longitudinal rugae on the epinotal declivity, without rugules on the base of the first gastric segment and with much more abundant and golden yellow pilosity. The appressed scale-like hairs are very conspicuous, on both the dorsal and pleural surfaces of the thorax and especially dense on the base of the epinotum. The erect or suberect hairs are also more numerous, coarser, more flexuous and more scale-like than in the preceding subspecies. The gaster which in these subspecies has very few hairs, is covered in *auricomus* with short, golden, appressed scale-like pilosity, which is very regular though not sufficiently dense to conceal the underlying surface. The epinotal spines are stout and straight, shorter than the base of the epinotum and directed backward and outward. The anterior corners of the petiolar node are angulate but not dentate.

Described from numerous specimens taken by Mr. Watson at Sanchez, in the Dominican Republic.

HYPOCRYPTOCERUS HAEMORRHODALIS VINOSUS subsp. nov.

*Worker.* Sculpture and coloration as in *affinis*, except that the base of the first gastric segment is very finely and indistinctly rugulose and its whole dorsal surface of a purplish maroon-color. The declivity of the epinotum is sharply and regularly, longitudinally rugose, the spines shorter than the base, slender, tapering, directed backward and out-

ward as in *auricomus*, but distinctly turned upward at their tips. Pronotal teeth long, blunt and flattened. Anterior corners of petiole angulate but not dentate; lateral spines of postpetiole broad and rather flat.

Pilosity whitish or pale yellowish, moderately abundant, the erect hairs blunt, coarse and somewhat flattened, almost absent on the upper surface of the gaster; blunt on the legs; the short, appressed hairs rather sparse on the thorax, very short on the anterior portion of the head.

Described from numerous specimens taken by Mr. Eyerdam on Mt. Rochelois, Haiti and accompanied by the note: "nesting in a beech; very pugnacious."

#### HYPOCRYPTOCERUS HAEMORRHODALIS STEINHEILI Forel

*Worker.* A single specimen from Samana, Dominican Republic (Watson) agrees perfectly with Forel's description of this subspecies, which has the dorsal surface of the first gastric segment reddish yellow, with a broad black median stripe extending from the middle of the first segment to the posterior border where it expands somewhat. There are no rugules on the base of the gaster. The pronotal spines are rather small and acute, the sides of the mesonotum short and edentate, the epinotal spines acute, nearly straight, as long as the base of the epinotum, directed upward, outward and backward. Anterior corners of petiolar node distinctly dentate; lateral spines of postpetiole as in *vinosus*. Pilosity similar.

The type of this subspecies, according to Forel, was collected by Henri de Saussure on the island of St. Thomas, but the locality seems to me to be doubtful. De Saussure collected in 1857 both in St. Thomas and Haiti, and neither Forel nor I found this ant on the former island. *Camponotus* (*Myrmeurgnota*) *saussurei*, which, according to Forel, was also collected by de Saussure in St. Thomas, seems to be open to the same suspicion. It is closely related to *C. (M.) toussainti* of Haiti and like *Hypocryptocerus steinheili* has not since been found on St. Thomas. Perhaps the two types in question may have been collected near Thomazeau, a town in Haiti.

#### HYPOCRYPTOCERUS HAEMORRHODALIS SIGNATUS subsp. nov.

*Worker.* At first sight easily confused with *steinheili* but quite distinct. The color of the gaster is very similar but the black stripe is much broader and more expanded anteriorly so that it is subtri-

angular. The epinotal declivity is coarsely and *transversely* rugose, the epinotal spines are decidedly longer than in any of the preceding subspecies, slender but not tapering, directed upward and outward, but only slightly backward, with the tips blunt and curved forward. The pronotal spines are rather long and acute, the sides of the mesonotum indistinctly dentate, the anterior corners of the petiolar node acutely dentate. Pilosity golden yellow, the erect hairs on the thoracic dorsum and posterior portion of head abundant, straight and of even length, the appressed squamiform hairs on the head and gaster very short, on the latter minute and sparse but distributed over the whole surface; hairs on legs white, short, sparse and blunt.

A single specimen taken by Dr. Darlington on the summit of Mt. Basil, Haiti, at an altitude of about 4500 ft.

*Cryptocerus* (*Cyathomyrmex*) *varians marginatus* Wheeler and Mann. Haiti: Manneville ♀ (Darlington).

*Mycocepurus smithi* Forel. Dominican Republic: San Lorenzo ♀ (Watson).

CYPHOMYRMEX RIMOSUS MINUTUS Mayr var. FLAVIDUS var. nov.

*Worker.* Length 1.4 — 1.5 mm.

Distinctly smaller than *minutus* and differing in coloration, being clear yellow, with the head, excepting the mandibles and borders of frontal lobes, and the first gastric segment, except its posterior border, brown.

Two workers from the northeastern foot-hills of the Massif de la Hotte, 3000, and one from Étang Lachaux, southwestern Haiti (Darlington).

*Trachymyrmex jamaicensis* Ern. André. Mona Island ♀ (Lutz). Haiti: Miragoane ♀ (Eyerdam).

Subfamily DOLICHODERINÆ

*Iridomyrmex keiteli* Forel var. *flavescens* Wheeler and Mann. Haiti: Northeastern foot-hills of the Massif de la Hotte, 3000 ft. ♀ (Darlington).

*Dorymyrmex pyramicus* Roger var. *niger* Pergande. Mona Island ♀ ♂ (Lutz).

*Tapinoma melanocephalum* Fabr. Mona Island ♀ (Lutz).

Subfamily FORMICINÆ

MYRMELACHISTA GAGATES sp. nov.

*Worker.* Length 1.7 mm.

Very similar to *rogeri* Ern. André of Cuba, but differing in the shape

of the head, thorax and petiole, in color and pilosity. Head larger and more sharply rectangular, less narrowed in front, where it is as broad as behind. Eyes larger. Promesonotum longer and somewhat less convex above, epinotum proportionally longer and broader. Petiolar scale decidedly thicker, with convex anterior surface and very sharp superior border, which is more deeply and more angularly excised than in *rogeri*.

Very smooth and shining, like *rogeri*, with similar pilosity, but the hairs on the gaster less numerous and longer. Jet black; antennae and mandibles dark brown, scapes darker and more blackish, their tips and the basal funicular joints yellowish brown; femora black; tibiae very dark brown, paler at their bases and tips; tarsi and tibial spurs brownish yellow; last tarsal joint of each leg blackish.

Described from a single specimen taken by Dr. Darlington at La Visite, 6000-7000 ft., Haiti.

*Camponotus (Tanaemyrmex) picipes plombyi* Wheeler and Mann. Haiti: Between Kenscoff and La Visite, 5000-7000 ft. ♀ (Darlington).

*Camponotus (Tanaemyrmex) larvigerus* Wheeler and Mann var. *maculifrons* Menozzi. Mona Island (Lutz). Numerous major and minor workers agreeing perfectly with the description of Menozzi's material from Santo Domingo and Los Siete Hermanos Islands.

*Camponotus (Tanaemyrmex) fumidus* Roger var. *illitus* Wheeler and Mann. Haiti: Hinche ♀ (Eyerdam); Kenscoff ♀ (Darlington).

*Camponotus (Tanaemyrmex) fumidus haytianus* Wheeler and Mann. Haiti: Summit of Mt. Rochelois ♀ (Eyerdam); Northeastern foot-hills of the Massif de la Hotte ♀ (Darlington).

#### CAMPONOTUS (TANAEMYRMEX) USTUS Forel

In the "Genera Insectorum" Emery places this West Indian ant, of which four different forms are known to occur in Haiti, in the sub-genus *Pseudocolobopsis*, but there seems to be no doubt of its being a *Tanaemyrmex*. As Forel noticed in 1879, it is related to *fumidus* Roger, though it is decidedly smaller and differently sculptured. It is even more closely allied to *ramulorum* Wheeler, which Emery has placed in *Tanaemyrmex*. The following undescribed varieties of these two species are sufficiently distinct to deserve names.

#### CAMPONOTUS (TANAEMYRMEX) USTUS var. *DEPOLITUS* var. nov.

*Worker major*. Length 6-6.5 mm.

Closely resembling the var. *ulysses* Forel, but the head is distinctly

narrower and more shining, with less pronounced punctures on the cheeks, which are naked and hairless. The clypeus is more sharply carinate, its anterior lobe more distinct and projecting. Mandibles and head dark brown, except the extreme occipital border and posterior corners which are yellow. Median portion of scapes distinctly infuscated. Dorsal surface of thorax brown, clouded with brownish yellow; dorsum of gaster pale brown, not fasciate, though the basal and apical borders of the segments are yellow. Coxæ, femora, petiole and much of venter pale whitish yellow; tibiæ darker and more reddish like the tarsi. Yellow erect pilosity on the dorsal surface of the body, especially on the front clypeus and scapes, decidedly less abundant than in the typical *ustus* and the variety *ulysses*; on the tibiæ much shorter and finer, reduced to a very delicate pubescence.

*Worker minor.* Length 5.5 mm.

Very similar to the worker minor of *ulysses* but the head is broader in proportion to its length and the erect hairs on the head and gaster are distinctly less numerous. Dorsal surface of head, thorax and gaster darker and more brownish than the remainder of the body. Antennal scapes not infuscated. Pubescence on scapes and tibiæ shorter than in the var. *ulysses*.

*Male.* Length 6 mm.

Pale yellowish brown; mandibles, clypeus, palpi, funiculi, legs, genitalia and anterior and posterior borders of gastric segments pale yellow; wings yellowish hyaline, with pale yellow veins and stigma.

Described from two major workers, one minor worker and a male from Sanchez, Dominican Republic (Watson).

CAMPONOTUS (TANAEMYRMEX) RAMULORUM Wheeler var. VERNULA  
var. nov.

*Worker major.* Length 4.5 — 5 mm.

Smaller than the typical *ramulorum* from the Bahamas and differing in coloration. Mandibles and whole head, except the posterior corners, very dark brown, as are also the antennal scapes, except their bases. Thorax also darker brown above than in *ramulorum*, with the yellow maculæ smaller; gaster paler brown, with yellow posterior borders to the segments but appearing much less distinctly fasciate than in the typical form of the species. Tibiæ and knees reddish. The coarse punctures on the cheeks and clypeus are much more pronounced than in *ramulorum* and the occiput has a row of coarse, elongate punctures.

*Worker minor.* Length about 4 mm.

Also smaller than the worker of the typical *ramulorum*; head, mesonotum, mesopleurae and dorsal surface of gaster distinctly brown; antennae, knees and tarsi more reddish.

Described from five major and two minor workers taken by Dr. Darlington in the northeastern foot-hills of the Massif de la Hotte, Haiti, at an altitude of 3000-4000 ft.

*Camponotus (Myrmeurynota) christophei* Wheeler and Mann. Haiti: One major worker from Ennery and two from Mt. Trou d'Eau (Darlington).

*Camponotus (Myrmeurynota) augustei* Wheeler and Mann. Haiti: Northeastern foot-hills of the Massif de la Hotte, 3000-4000 ft. ♀; Camp Perrin, 3000 ft. ♀; Port au Prince ♀; Trou d'Eau, 4500 ft. ♀; Above Furey ♀ (Darlington). This additional material indicates that *augustei* is to be regarded as an independent species and not as a subspecies of *christophei*.

*Camponotus (Myrmeurynota) toussainti* Wheeler and Mann. Haiti: One minor worker from La Visite, 6000-7000 ft. (Darlington).

CAMPONOTUS (MYRMEURYNOTA) ALTIVAGANS sp. nov.

*Worker major.* Length 5.5 — 6.5 mm.

Head trapezoidal, as broad as long, with straight posterior border and feebly convex, anteriorly converging sides. Eyes moderately large, at the posterior third of the head, without clearly developed ridges between the posterior orbits and posterior corners. Mandibles stout and convex, apparently 5-toothed, the apical tooth longer and stouter than the four subequal, narrow basal teeth. Clypeus trapezoidal, as long as broad, carinate basally, the anterior border broadly rounded in the middle and deeply sinuate on each side. Frontal area distinct, transversely triangular; frontal carinae anteriorly approximated, widely diverging behind; frontal groove distinct. Antennae slender; scapes curved at base, distinctly thickened distally, extending about two-fifths their length beyond the posterior border of the head. Thorax in profile evenly but not very convexly arcuate as far as the posterior end of the base of the epinotum, where it rounds into the rather steeply sloping declivity, which is of the same length as the base. Promesonotal suture impressed; mesoepinotal suture indistinct. From above the pronotum is flattened, nearly as long as broad, produced in the middle anteriorly, the sides rounded, marginate anteriorly at the humeri and halfway back to the promesonotal suture, the anterior and inferoanterior border of the pronotum developed as a narrow subtransparent lamella. Mesonotum also somewhat flattened above, slightly broader than long, subtrapezoidal, its sides rounded and converging posteriorly. Petiolar scale inclined forward, oval, rather thick,

with convex anterior and flattened posterior surface and rather blunt superior border. Gaster broadly elliptical, the first segment flatly truncated anteriorly. Legs stout; fore femora enlarged.

Subopaque; gula, posterior corners of head, venter and legs more shining. Mandibles finely shagreened and coarsely and sparsely punctate. Head, thorax and petiole densely and finely punctate or sharply reticulate, with coarse, scattered, piligerous punctures, which are lacking on the sides of the thorax, where the sculpture becomes more punctulate-striolate. Gaster above very finely, sharply and transversely striolate-reticulate, with sparse, coarse, transverse, piligerous punctures. Venter smoother; scapes more sharply, legs more superficially shagreened.

Pilosity consisting of flattened or scalelike hairs, partly white, erect, longest on the epinotum, border of petiolar scale and dorsal surface of gaster and short on the head and clypeus, and partly yellowish and appressed, directed forward on the head and thorax and backward on the gaster. Pilosity on legs simple, very sparse, short and appressed, except for a row of long hairs on the flexor surfaces of the femora and a few bristle-like hairs at their tips.

Black; mandibles, except their teeth, scapes and base of petiole red; funiculi fuscous; posterior borders of gastric segments sordid yellowish; legs reddish testaceous, tarsi darker red.

*Worker minor.* Length 4 mm.

Differing from the major in the following characters: Pronotum proportionally broader, less produced anteriorly in the middle, its sides sharply marginate or sublimate throughout; epinotum more strongly narrowed behind and in profile distinctly angular, the declivity longer than the base, more abrupt and decidedly concave. Appressed flattened hairs as numerous and as long on the head as on the thorax and gaster, but absent on the sides as they are on the pleuræ. Sides and posterior corners of head reddish; whole petiole red or testaceous; scapes as pale as the legs.

Described from three major and three minor workers taken by Dr. Darlington between La Visite and Kenscoff. Without the minor worker one might be tempted to place this species in the subgenus *Myrmobrachys* because the lateral borders of the pronotum are so much less expanded than in the other Haitian species of *Myrmeurynota*.

CAMPONOTUS (MYRMEURYNOTA) ALBISTRAMINEUS sp. nov.

*Worker minor.* Length 4.3 mm.

Head nearly as broad as long, subtrapezoidal, narrowed anteriorly,



with rounded sides and posterior corners and feebly convex posterior border. Eyes rather large and flat, placed well behind the median diameter of the head. Mandibles rather large, convex, 5-toothed, the apical tooth much longer than the broad, subequal basal teeth. Clypeus trapezoidal, broader than long, ecarinate and not very convex in the middle, the anterior border broadly rounded, very slightly produced medially and feebly sinuate on each side. Frontal area and frontal groove obsolete; frontal carinae sigmoidal, distinctly elevated and widely diverging posteriorly. Antennae long and slender; scapes only feebly curved at the base, extending about two-fifths their length beyond the posterior border of the head. Thorax rather short and high, its dorsal outline strongly arcuate, interrupted only by the impressed promesonotal suture and a very obtuse angle separating the base of the sloping declivity from its distinctly longer and more abrupt declivity. Mesoepinotal suture obsolete. From above the thorax is about twice as long as broad, gradually narrowed posteriorly; pronotum about one and two-thirds as broad as long, somewhat narrower behind than in front, with feebly rounded, sharply marginate sides which are expanded into bluntly angular and slightly upturned lamellae at the humeri; mesonotum subelliptical, nearly twice as broad as long; base of epinotum roof-shaped, its two halves meeting at a blunt but perceptible ridge in the median line. Petiolar scale from behind broad and suborbicular above, strongly narrowed ventrally, in profile high and moderately thick, with blunt superior border, feebly convex anterior and flat posterior surface. Gaster broadly elliptical, the first segment truncated anteriorly. Legs rather long, fore femora enlarged.

Opaque; venter, petiole and legs smoother and more shining. Mandibles finely shagreened and coarsely and sparsely punctate. Head and thorax finely, densely, sharply and very regularly punctulate; sides of thorax with the punctules arranged in parallel lines. Petiolar sculpture feebler, the posterior surface of the scale transversely striolate. Dorsal surface of gaster finely, sharply and transversely reticulate, with coarse, transverse, piligerous punctures. Venter and anterior truncated surface of first segment superficially shagreened or reticulate. Antennal scapes more opaque and more sharply and densely reticulate or granular.

Pilosity similar to that of *altivagans* but the hairs are snow white, the appressed ones on the head, thorax and gaster even more distinctly flattened and scale-like and with a more general distribution. Not only are there hairs of this type on the sides of the head but also on

the inferior border of the pronotum and in conspicuous tufts on the meso- and metasterna, middle and hind coxæ. Posterior faces of fore femora with similar but sparser and less flattened hairs. Knees and tips of tibiæ with a few conspicuous yellow bristles. Middle and hind femora and all the tibiæ with very sparse, simple hairs, or coarse, dilute pubescence; coxæ with finer, denser, appressed pubescence.

Coal black; gastric segments with dull whitish posterior borders; tips of tarsi dark brown; mandibles red, with black teeth; antennæ paler, yellowish red, or testaceous.

Described from a single specimen taken by Dr. Darlington on Mt. Trou d'Eau, 4000 ft., Haiti.

*Paratrechina longicornis* Latr. Haiti: Miragoane ♀ (Eyerdam).

*Paratrechina longicornis* var. *hagemanni* Forel. Mona Island ♀ (Lutz).

Haiti: Miragoane ♀ (Eyerdam). Dominican Republic: Sanchez ♀ (Watson).

*Nylanderia fulva* Mayr. Dominican Republic: Sanchez, ♀ ♀ (Watson).

*Nylanderia steinheili* Forel. Haiti: Miragoane ♀ (Darlington).

NYLANDERIA DARLINGTONI sp. nov.

*Worker.* Length 1.8 — 2.4 mm.

Head subrectangular, slightly longer than broad, as broad in front as behind, with feebly and evenly convex sides and straight posterior border. Eyes rather large, moderately convex, at the middle of the sides. Mandibles narrow, with oblique 6-toothed blades, the third and fifth tooth from the apex smaller than the others. Clypeus convex and subcarinate in the middle, its anterior border entire and broadly rounded. Frontal area large but indistinct. Antennæ long and slender; scapes extending about two-fifths of their length beyond the posterior border of the head; second funicular joint small, broader than long, joints 3-10 subequal, nearly twice as long as broad, terminal joint nearly as long as the two preceding joints together. Thorax in profile with feebly convex promesonotum, gradually rising to the mesoëpino-tal impression which is very short, abrupt and shallow, the epinotum rising somewhat behind it to form a very short base and then falling in a very flat curve to the metasternal angles. Seen from above the thorax is about two and one-half times as long as broad, somewhat broader through the pronotum than through the posterior rectangular portion of the epinotum; pronotum broader than long, mesonotum longer than broad; metanotal spiracles not prominent, separated by a distance equal to fully three times their diameter. Petiole with low,

thick, anteriorly inclined node, half as broad as the epinotum, with straight, transverse, blunt summit, its sides converging inferoposteriorly, its posterior surface feebly convex. Gaster rather large, convex dorsally, with acute tip, the first segment shaped as in *Prenolepis imparis* Say, with a concavity for the reception of the petiolar scale, medially marginate above and acutely angular on each side. Legs rather long and slender.

Very smooth and shining, with fine, sparse, piligerous punctures; gaster delicately shagreened. Mandibles finely, longitudinally striolate. Legs and scapes less shining, very finely and densely punctulate.

Hairs on gaster and dorsal surface of head and pronotum yellowish, erect, sparse and tapering. Pubescence appressed, rather long on the head, shorter and denser on the gaster and even finer and denser on the legs. There are no bristle-like erect hairs on the legs and scapes.

Sordid, pale yellowish brown or brownish yellow; dorsal surface of gaster darker brown; scapes and median portions of femora and tibiae feebly infuscated; coxæ, trochanters and tarsi pale yellow; mandibles reddish, with darker reddish teeth.

Described from seven workers taken by Dr. Darlington between La Visite and Kenscoff, Haiti, at an altitude of 5000-7000 ft. Except in the structure of the thorax, this ant seems to be more like a *Prenolepis* than a *Nylanderia*. The larger specimens are true repletes, with greatly distended gaster, like the repletes of our common North American *P. imparis* Say.